

Application No. 10/650,062  
Response to Office Action

Customer No. 01933

Listing of Claims:

Claims 1-5 (Canceled).

6. (Currently Amended) A laser scanning microscope comprising:

a first optical scanning system which scans a first laser light for observing a sample on the sample;

5 a first light branch device which separates a light from the sample from an optical path of the first laser light;

at least one photodetector which detects the light from the sample separated by the first light branch device;

10 a second optical scanning system which irradiates a specific portion on the sample with a second laser light for stimulating or operating the sample; and

15 a wavelength selection device which is disposed between the first light branch device and the photodetector and which has a first function of transmitting a desired observation light and a second function of limiting transmission of the second laser light;

wherein the second optical scanning system is attachable and detachable with respect to a main body of the laser scanning microscope that includes the first optical scanning system.

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7. (Currently Amended) ~~The~~ A laser scanning microscope according to claim 6, comprising:

a first optical scanning system which scans a first laser light for observing a sample on the sample;

5 a first light branch device which separates a light from the sample from an optical path of the first laser light;

at least one photodetector which detects the light from the sample separated by the first light branch device;

10 a second optical scanning system which irradiates a specific portion on the sample with a second laser light for stimulating or operating the sample; and

15 a wavelength selection device which is disposed between the first light branch device and the photodetector and which has a first function of transmitting a desired observation light and a second function of limiting transmission of the second laser light;

wherein the wavelength selection device comprises an interference filter.

8. (Currently Amended) ~~The~~ A laser scanning microscope according to claim 6, comprising:

a first optical scanning system which scans a first laser light for observing a sample on the sample;

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5       a first light branch device which separates a light from the sample from an optical path of the first laser light;  
          at least one photodetector which detects the light from the sample separated by the first light branch device;  
          a second optical scanning system which irradiates a specific portion on the sample with a second laser light for stimulating or operating the sample; and  
          a wavelength selection device which is disposed between the first light branch device and the photodetector and which has a first function of transmitting a desired observation light and a second function of limiting transmission of the second laser light;

wherein a transmittance of the second laser light of by the wavelength selection device is not more than 0.01%.

Claim 9 (Canceled).

10. (Previously Presented) The laser scanning microscope according to claim 8, wherein the wavelength selection device comprises an interference filter comprising:

5        a first interference coating, which performs the first function, on one surface of a substrate; and  
          a second interference coating, which performs the second function, on another surface of the substrate.

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11. (Original) The laser scanning microscope according to claim 8, wherein the second laser light is an ultraviolet or infrared light.

12. (Currently Amended) The A laser scanning microscope according to claim 6, comprising:

a first optical scanning system which scans a first laser light for observing a sample on the sample;

5 a first light branch device which separates a light from the sample from an optical path of the first laser light;

at least one photodetector which detects the light from the sample separated by the first light branch device;

10 a second optical scanning system which irradiates a specific portion on the sample with a second laser light for stimulating or operating the sample; and

a wavelength selection device which is disposed between the first light branch device and the photodetector and which has a first function of transmitting a desired observation light and a 15 second function of limiting transmission of the second laser light;

wherein the wavelength selection device comprises:

at least one first interference filter which performs the first function; and

20 at least one second interference filter which performs the second function.

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13. (Previously Presented) The laser scanning microscope according to claim 12, wherein:

the at least one photodetector comprises a plurality of photodetectors and the at least one first interference filter 5 comprises a plurality of first interference filters;

a second light branch device which splits the light from the sample toward the photodetectors is disposed between the first light branch device and the photodetectors;

the second interference filter is disposed between the first 10 and second light branch devices; and

the first interference filters are disposed between the respective photodetectors and the second light branch device.

14. (Original) The laser scanning microscope according to claim 12, further comprising:

a wavelength change section which changes a wavelength of the second laser light; and

5 a filter change section which changes the second interference filter in accordance with the wavelength of the second laser light.

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15. (Previously Presented) The laser scanning microscope according to claim 7, wherein the interference filter comprises:

a first interference coating which performs the first function; and

5 a second interference coating which performs the second function.

16. (Original) The laser scanning microscope according to claim 6, wherein the second laser light is an ultraviolet or infrared light.

Claims 17 and 18 (Canceled).

19. (Original) The laser scanning microscope according to claim 6, wherein the desired observation light is a fluorescence excited by the first laser light.

20. (New) The laser scanning microscope according to claim 12, wherein a transmittance of the second laser light by the wavelength selection device is not more than 0.01%.

21. (New) The laser scanning microscope according to claim 12, wherein the second laser light is an ultraviolet or infrared light.